SEQUENCE LISTING

<110> Allen, Stephen
Heppard, Elmer
Sakai, Hajime
Weng, Zude
Helentjaris, Tim
Macool, Daniel
Miao, Guo-Hua

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Gly Tyr Leu Pro Phe Asp Glu Val Asp Leu Thr Thr Leu Tyr Gly Lys
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385 390 395 400

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Lys Lys Ile Lys Gly Gly Ile Tyr Thr Leu Pro Ser His Leu Ser Ala
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Pro Val Glu Arg Lys Trp Ala Leu Gly Leu Gln Ser Arg Ala His Pro
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405 410 415

Arg Trp Lys Lys Asn Gly His Tyr Asn Val Lys Cys Arg Trp Cys Pro
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Gly Phe Pro Glu Val Asn Asp Thr Leu Asp Ala Ser Asn Ser Phe Leu
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Gly Asp Ser Thr Ile Met Asp Asn Asp Asp Ala Asn Gly Arg Leu Pro
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Thr Val Ile Lys Phe Glu Phe Gln Leu Tyr Lys Thr Lys Asp Asp Lys
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Gly Arg Asp Ala Asn Pro Leu Ser Gly Tyr Arg Ile Gly Lys Thr Leu
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Gly Ile Gly Ser Phe Gly Lys Val Lys Ile Ala Glu His Ile Leu Thr
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Gly His Lys Val Ala Ile Lys Ile Leu Asn Arg Lys Lys Ile Arg Ser
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Phe Phe Gln Gln Ile Ile Ser Gly Val Glu Tyr Cys His Arg Asn Met
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Cys Asn Val Lys Ile Ala Asp Phe Gly Leu Ser Asn Ile Met Arg Asp
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Pro Thr Ser Ala Thr Glu Leu Arg Gln His Gly Phe Ser Glu Ser Pro
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Gly Ser Gly Leu Arg Gln His Phe Ala Ala Glu Arg Lys Trp Ala Leu
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Ala Leu His Glu Ser Ile Arg Asp Gly Gly Lys Ile Tyr Leu Val Leu
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Glu Tyr Cys Arg Gly Gly Asp Leu His Ser Tyr Leu Gln Gln His Lys
85 90 95

Arg Val Ser Glu Thr Val Ala Lys His Phe Ile Gln Gln Leu Ala Ser
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Gly Leu Gln Met Leu Arg Glu Asn Asn Val Val His Arg Asp Leu Lys
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<213> Glycine max

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Tyr Glu Leu Gly Arg Val Leu Gly His Gly Ser Phe Ala Lys Val Tyr
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His Ala Arg Asn Leu Lys Thr Gly Gln His Val Ala Met Lys Val Val
35 40 45

Gly Lys Glu Lys Val Ile Lys Val Gly Met Met Glu Gln Val Lys Arg
50 55 60

Glu Ile Ser Val Met Lys Met Val Lys His Pro Asn Ile Val Glu Leu
65 70 75 80

His Glu Val Met Ala Ser Lys Ser Lys Ile Tyr Ile Ser Ile Glu Leu
85 90 95

Val Arg Gly Gly Glu Leu Phe Asn Lys Val Ser Lys Gly Arg Leu Lys
100 105 110

Glu Asp Leu Ala Arg Leu Tyr Phe Gln Gln Leu Ile Ser Ala Val Asp
115 120 125

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Phe Cys His Ser Arg Gly Val Tyr His Arg Asp Leu Lys Pro Glu Asn
    130                 135                 140

Leu Leu Leu Asp Glu His Gly Asn Leu Lys Val Ser Asp Phe Gly Leu
145                 150                 155                 160

Thr Ala Phe Ser Asp His Leu Lys Glu Asp Gly Leu Leu His Thr Thr
                165                 170                 175

Cys Gly Thr Pro Ala Tyr Val Ser Pro Glu Val Ile Ala Lys Lys Gly
            180                 185                 190

Tyr Asp Gly Ala Lys Ala Asp Ile Trp Ser Cys Gly Val Ile Leu Tyr
        195                 200                 205

Val Leu Leu Ala Gly Phe Leu Pro Phe Gln Asp Asp Asn Leu Val Ala
    210                 215                 220

Met Tyr Lys Lys Ile His Arg Gly Asp Phe Lys Cys Pro Pro Trp Phe
225                 230                 235                 240

Ser Leu Asp Ala Arg Lys Leu Val Thr Lys Leu Leu Asp Pro Asn Pro
                245                 250                 255

Asn Thr Arg Ile Ser Ile Ser Lys Val Met Glu Ser Ser Trp Phe Lys
            260                 265                 270

Lys Gln Val Pro Arg Lys Val Glu Glu Val Val Glu Lys Val Asp Leu
        275                 280                 285

Glu Glu Lys Ile Glu Asn Gln Glu Thr Met Asn Ala Phe His Ile Ile
    290                 295                 300

Ser Leu Ser Glu Gly Phe Asn Leu Ser Pro Leu Phe Glu Glu Lys Arg
305                 310                 315                 320

Lys Glu Glu Met Arg Phe Ala Thr Ala Gly Thr Pro Ser Ser Val Ile
                325                 330                 335

Ser Arg Leu Glu Glu Val Ala Lys Ala Gly Lys Phe Asp Val Lys Ser
            340                 345                 350

Ser Glu Thr Lys Val Arg Leu Gln Gly Gln Glu Arg Gly Arg Lys Gly
        355                 360                 365

Lys Leu Ala Ile Ala Ala Asp Ile Tyr Ala Val Thr Pro Ser Phe Met
    370                 375                 380

Val Val Glu Val Lys Lys Asp Asn Gly Asp Thr Leu Glu Tyr Asn Gln
385                 390                 395                 400

Phe Cys Ser Lys Gln Leu Arg Pro Ala Leu Lys Asp Ile Phe Trp Asn
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Ser Ala Pro Ala Ser Ala
            420
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<211> 2123

<212> DNA
<213> Glycine max

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<211> 514
<212> PRT
<213> Glycine max

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Pro Asn Tyr Lys Leu Gly Lys Thr Leu Gly Ile Gly Ser Phe Gly Lys
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Val Lys Ile Ala Glu His Val Leu Thr Gly His Lys Val Ala Ile Lys
35 40 45

Ile Leu Asn Arg Arg Lys Ile Lys Asn Met Glu Met Glu Glu Lys Val
50 55 60

Arg Arg Glu Ile Lys Ile Leu Arg Leu Phe Met His Pro His Ile Ile

65 70 75 80

Arg Leu Tyr Glu Val Ile Glu Thr Pro Thr Asp Ile Tyr Val Val Met
85 90 95

Glu Tyr Val Lys Ser Gly Glu Leu Phe Asp Tyr Ile Val Glu Lys Gly
100 105 110

Arg Leu Gln Glu Asp Glu Ala Arg Asn Phe Phe Gln Gln Ile Ile Ser
115 120 125

Gly Val Glu Tyr Cys His Arg Asn Met Val Val His Arg Asp Leu Lys
130 135 140

Pro Glu Asn Leu Leu Leu Asp Ser Lys Cys Asn Val Lys Ile Ala Asp
145 150 155 160

Phe Gly Leu Ser Asn Ile Met Arg Asp Gly His Phe Leu Lys Thr Ser
165 170 175

Cys Gly Ser Pro Asn Tyr Ala Ala Pro Glu Val Ile Ser Gly Lys Leu
180 185 190

Tyr Ala Gly Pro Glu Val Asp Val Trp Ser Cys Gly Val Ile Leu Tyr
195 200 205

Ala Leu Leu Cys Gly Thr Leu Pro Phe Asp Asp Glu Asn Ile Pro Asn
210 215 220

Leu Phe Lys Lys Ile Lys Gly Gly Ile Tyr Thr Leu Pro Ser His Leu
225 230 235 240

Ser Pro Gly Ala Arg Asp Leu Ile Pro Gly Met Leu Val Val Asp Pro
245 250 255

Met Arg Arg Met Thr Ile Pro Glu Ile Arg Gln His Pro Trp Phe Gln
260 265 270

Ala Arg Leu Pro Arg Tyr Leu Ala Val Pro Pro Pro Asp Thr Met Gln
275 280 285

Gln Ala Lys Lys Ile Asp Glu Glu Ile Leu Gln Glu Val Val Lys Met
290 295 300

Gly Phe Asp Arg Asn Gln Leu Val Glu Ser Leu Gly Asn Arg Ile Gln
305 310 315 320

Asn Glu Gly Thr Val Ala Tyr Tyr Leu Leu Leu Asp Asn Arg Phe Arg
325 330 335

Val Ser Ser Gly Tyr Leu Gly Ala Glu Phe Gln Glu Thr Met Asp Ser
340 345 350

Gly Phe Asn Gln Met His Ser Ser Glu Leu Ala Ser Ser Val Val Gly
355 360 365

Asn Arg Phe Pro Gly Tyr Met Glu Tyr Pro Gly Val Gly Ser Arg Gln
370 375 380

Gln Phe Pro Val Glu Arg Lys Trp Ala Leu Gly Leu Gln Ser Arg Ala

385 390 395 400

His Pro Arg Glu Ile Met Thr Glu Val Leu Lys Ala Leu Gln Glu Leu
405 410 415

Asn Val Cys Trp Lys Lys Ile Gly His Tyr Asn Met Lys Cys Arg Trp
420 425 430

Val Ala Gly Ile Pro Gly His His Glu Gly Met Val Asn Asn Asn Val
435 440 445

His Ser Asn His Tyr Phe Gly Asp Asp Ser Asn Ile Ile Glu Asn Asp
450 455 460

Ala Val Ser Thr Ser Asn Val Val Lys Phe Glu Val Gln Leu Tyr Lys
465 470 475 480

Thr Arg Glu Glu Lys Tyr Leu Leu Asp Leu Gln Arg Val Gln Gly Pro
485 490 495

Gln Phe Leu Phe Leu Asp Leu Cys Ala Ala Phe Leu Ala Gln Leu Arg
500 505 510

Val Leu

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<211> 2040
<212> DNA
<213> Glycine max

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tgaaccaaac acaaaattcc atccaccact tctcttttca atccccaact caaatctgtg 240
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<211> 438
<212> PRT
<213> Glycine max

<400> 14

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Leu His Gly Lys Tyr Glu Leu Gly Arg Leu Leu Gly His Gly Thr Phe
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Ala Lys Val Tyr His Ala Arg His Leu Lys Thr Gly Lys Ser Val Ala
         35                  40                  45

Met Lys Val Val Gly Lys Glu Lys Val Val Lys Val Gly Met Met Glu
     50                  55                  60

Gln Ile Lys Arg Glu Ile Ser Ala Met Asn Met Val Lys His Pro Asn
 65                  70                  75                  80

Ile Val Gln Leu His Glu Val Met Ala Ser Lys Ser Lys Ile Tyr Ile
                 85                  90                  95

Ala Met Glu Leu Val Arg Gly Gly Glu Leu Phe Asn Lys Ile Ala Arg
            100                 105                 110

Gly Arg Leu Arg Glu Glu Met Ala Arg Leu Tyr Phe Gln Gln Leu Ile
        115                 120                 125

Ser Ala Val Asp Phe Cys His Ser Arg Gly Val Tyr His Arg Asp Leu
    130                 135                 140

Lys Pro Glu Asn Leu Leu Leu Asp Asp Asp Gly Asn Leu Lys Val Thr
145                 150                 155                 160

Asp Phe Gly Leu Ser Thr Phe Ser Glu His Leu Arg His Asp Gly Leu
                165                 170                 175

Leu His Thr Thr Cys Gly Thr Pro Ala Tyr Val Ala Pro Glu Val Ile
            180                 185                 190

Gly Lys Arg Gly Tyr Asp Gly Ala Lys Ala Asp Ile Trp Ser Cys Gly
        195                 200                 205

Val Ile Leu Tyr Val Leu Leu Ala Gly Phe Leu Pro Phe Gln Asp Asp
    210                 215                 220

Asn Leu Val Ala Leu Tyr Lys Lys Ile Tyr Arg Gly Asp Phe Lys Cys
225                 230                 235                 240

Pro Pro Trp Phe Ser Ser Glu Ala Arg Arg Leu Ile Thr Lys Leu Leu
                245                 250                 255
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Asp Pro Asn Pro Asn Thr Arg Ile Thr Ile Ser Lys Ile Met Asp Ser
260 265 270

Ser Trp Phe Lys Lys Pro Val Pro Lys Asn Leu Met Gly Lys Lys Arg
275 280 285

Glu Glu Leu Asp Leu Glu Glu Lys Ile Lys Gln His Glu Gln Glu Val
290 295 300

Ser Thr Thr Met Asn Ala Phe His Ile Ile Ser Leu Ser Glu Gly Phe
305 310 315 320

Asp Leu Ser Pro Leu Phe Glu Glu Lys Lys Arg Glu Glu Lys Glu Leu
325 330 335

Arg Phe Ala Thr Thr Arg Pro Ala Ser Ser Val Ile Ser Arg Leu Glu
340 345 350

Asp Leu Ala Lys Ala Val Lys Phe Asp Val Lys Lys Ser Glu Thr Lys
355 360 365

Val Arg Leu Gln Gly Gln Glu Lys Gly Arg Lys Gly Lys Leu Ala Ile
370 375 380

Ala Ala Asp Leu Tyr Ala Val Thr Pro Ser Phe Leu Val Val Glu Val
385 390 395 400

Lys Lys Asp Asn Gly Asp Thr Leu Glu Tyr Asn Gln Phe Cys Ser Lys
405 410 415

Glu Leu Arg Pro Ala Leu Lys Asp Ile Val Trp Arg Thr Ser Pro Ala
420 425 430

Glu Asn Pro Thr Leu Ala
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<211> 2543
<212> DNA
<213> Glycine max

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<210> 16
<211> 515
<212> PRT
<213> Glycine max

<400> 16

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Leu Arg Asn Tyr Lys Leu Gly Lys Thr Leu Gly Ile Gly Ser Phe Gly
             20                  25                  30

Lys Val Lys Ile Ala Glu His Val Arg Thr Gly His Lys Val Ala Ile
         35                  40                  45

Lys Ile Leu Asn Arg His Lys Ile Lys Asn Met Glu Met Glu Glu Lys
     50                  55                  60

Val Arg Arg Glu Ile Lys Ile Leu Arg Leu Phe Met His His His Ile
 65                  70                  75                  80

Ile Arg Leu Tyr Glu Val Val Glu Thr Pro Thr Asp Ile Tyr Val Val
                 85                  90                  95

Met Glu Tyr Val Lys Ser Gly Glu Leu Phe Asp Tyr Ile Val Glu Lys
            100                 105                 110

Gly Arg Leu Gln Glu Asp Glu Ala Arg His Phe Phe Gln Gln Ile Ile
        115                 120                 125

Ser Gly Val Glu Tyr Cys His Arg Asn Met Val Val His Arg Asp Leu
    130                 135                 140
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Lys Pro Glu Asn Leu Leu Leu Asp Ser Lys Phe Asn Ile Lys Ile Ala
145 150 155 160

Asp Phe Gly Leu Ser Asn Ile Met Arg Asp Gly His Phe Leu Lys Thr
165 170 175

Ser Cys Gly Ser Pro Asn Tyr Ala Ala Pro Glu Val Ile Ser Gly Lys
180 185 190

Leu Tyr Ala Gly Pro Glu Val Asp Val Trp Ser Cys Gly Val Ile Leu
195 200 205

Tyr Ala Leu Leu Cys Gly Thr Leu Pro Phe Asp Asp Glu Asn Ile Pro
210 215 220

Asn Leu Phe Lys Lys Ile Lys Gly Gly Ile Tyr Thr Leu Pro Ser His
225 230 235 240

Leu Ser Pro Gly Ala Arg Asp Leu Ile Pro Arg Met Leu Val Val Asp
245 250 255

Pro Met Lys Arg Met Thr Ile Pro Glu Ile Arg Gln His Pro Trp Phe
260 265 270

Gln Val His Leu Pro Arg Tyr Leu Ala Val Pro Pro Pro Asp Thr Leu
275 280 285

Gln Gln Ala Lys Lys Ile Asp Glu Glu Ile Leu Gln Glu Val Val Asn
290 295 300

Met Gly Phe Asp Arg Asn Gln Leu Val Glu Ser Leu Ser Asn Arg Ile
305 310 315 320

Gln Asn Glu Gly Thr Val Thr Tyr Tyr Leu Leu Leu Asp Asn Arg Phe
325 330 335

Arg Val Ser Ser Gly Tyr Leu Gly Ala Glu Phe Gln Glu Thr Met Asp
340 345 350

Ser Gly Phe Asn Arg Met His Ser Gly Glu Val Ala Ser Pro Val Val
355 360 365

Gly His His Ser Thr Gly Tyr Met Asp Tyr Gln Gly Val Gly Met Arg
370 375 380

Gln Gln Phe Pro Val Glu Arg Lys Trp Ala Leu Gly Leu Gln Ser Arg
385 390 395 400

Ala Gln Pro Arg Glu Ile Met Thr Glu Val Leu Lys Ala Leu Gln Glu
405 410 415

Leu Asn Val Cys Trp Lys Lys Ile Gly His Tyr Asn Met Lys Cys Arg
420 425 430

Trp Val Ala Gly Thr Ala Gly His His Glu Gly Met Ile Asn Asn Ser
435 440 445

Leu His Ser Asn His Tyr Phe Gly Asn Asp Ser Gly Ile Ile Glu Asn
450 455 460

Glu Ala Val Ser Lys Ser Asn Val Val Lys Phe Glu Val Gln Leu Tyr
465 470 475 480

Lys Thr Arg Glu Glu Lys Tyr Leu Leu Asp Leu Gln Arg Val Gln Gly
485 490 495

Pro Gln Phe Leu Phe Leu Asp Leu Cys Ala Ala Phe Leu Ser Gln Leu
500 505 510

Arg Val Leu
515

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<211> 1869
<212> DNA
<213> Glycine max

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cccgtggctc ttaaaattct tgacaaggag aaggtgctaa agcacaagat ggctgagcag 420
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aagccagaaa atttgctatt agatacttat gggaacctta aagtttctga ttttggtttg 720
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aaaaaaaaa 1869

<210> 18
<211> 441
<212> PRT
<213> Glycine max

<400> 18
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1 5 10 15

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Arg Thr Ile Gly Glu Gly Thr Phe Ala Lys Val Lys Phe Ala Arg Asn
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Ser Glu Thr Gly Glu Pro Val Ala Leu Lys Ile Leu Asp Lys Glu Lys
        35                  40                  45

Val Leu Lys His Lys Met Ala Glu Gln Ile Arg Arg Glu Val Ala Thr
    50                  55                  60

Met Lys Leu Ile Lys His Pro Asn Val Val Arg Leu Tyr Glu Val Met
65                  70                  75                  80

Gly Ser Lys Thr Lys Ile Tyr Ile Val Leu Glu Phe Val Thr Gly Gly
                85                  90                  95

Glu Leu Phe Asp Lys Ile Val Asn His Gly Arg Met Ser Glu Asn Glu
            100                 105                 110

Ala Arg Arg Tyr Phe Gln Gln Leu Ile Asn Ala Val Asp Tyr Cys His
        115                 120                 125

Ser Arg Gly Val Tyr His Arg Asp Leu Lys Pro Glu Asn Leu Leu Leu
    130                 135                 140

Asp Thr Tyr Gly Asn Leu Lys Val Ser Asp Phe Gly Leu Ser Ala Leu
145                 150                 155                 160

Ser Gln Gln Val Arg Asp Asp Gly Leu Leu His Thr Thr Cys Gly Thr
                165                 170                 175

Pro Asn Tyr Val Ala Pro Glu Val Leu Asn Asp Arg Gly Tyr Asp Gly
            180                 185                 190

Ala Thr Ala Asp Leu Trp Ser Cys Gly Val Ile Leu Phe Val Leu Val
        195                 200                 205

Ala Gly Tyr Leu Pro Phe Asp Asp Pro Asn Leu Met Asn Leu Tyr Lys
    210                 215                 220

Lys Ile Ser Ala Ala Glu Phe Thr Cys Pro Pro Trp Leu Ser Phe Thr
225                 230                 235                 240

Ala Arg Lys Leu Ile Thr Arg Ile Leu Asp Pro Asp Pro Thr Thr Arg
                245                 250                 255

Ile Thr Ile Pro Glu Ile Leu Asp Asp Glu Trp Phe Lys Lys Glu Tyr
            260                 265                 270

Lys Pro Pro Ile Phe Glu Glu Asn Gly Glu Ile Asn Leu Asp Asp Val
        275                 280                 285

Glu Ala Val Phe Lys Asp Ser Glu Glu His His Val Thr Glu Lys Lys
    290                 295                 300

Glu Glu Gln Pro Thr Ala Met Asn Ala Phe Glu Leu Ile Ser Met Ser
305                 310                 315                 320

Lys Gly Leu Asn Leu Glu Asn Leu Phe Asp Thr Glu Gln Gly Phe Lys
                325                 330                 335
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Arg Glu Thr Arg Phe Thr Ser Lys Ser Pro Ala Asp Glu Ile Ile Asn
            340                 345                 350

Lys Ile Glu Glu Ala Ala Lys Pro Leu Gly Phe Asp Val Gln Lys Lys
        355                 360                 365

Asn Tyr Lys Met Arg Leu Ala Asn Val Lys Ala Gly Arg Lys Gly Asn
    370                 375                 380

Leu Asn Val Ala Thr Glu Ile Phe Gln Val Ala Pro Ser Leu His Met
385                 390                 395                 400

Val Glu Val Arg Lys Ala Lys Gly Asp Thr Leu Glu Phe His Lys Phe
                405                 410                 415

Tyr Lys Lys Leu Ser Thr Ser Leu Asp Asp Val Val Trp Lys Thr Glu
            420                 425                 430

Asp Asp Met Gln Met Arg Glu Thr Lys
        435                 440
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<210> 19
<211> 817
<212> DNA
<213> Triticum aestivum

<400> 19

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gaacattagg tataggcaca tttggaaaag tgaggattgc agagcataag catacagggc 180
ataaagttgc tataaagatt ctgaaccgtc gtcaaatgag aactatggaa atggaggaga 240
aagcaaagag agagatcaag atattgaggt tgttcatcca ccctcatatc atccggcttt 300
atgaggtcat ttacacacct acagatatat ttgttgtgat ggaatattgc aagtatggtg 360
agctattcga ctgcattgtt gagaaagggc ggttacagga agatgaggct cgtcgaatct 420
tccagcagat tatatctggt gttgaatact gccacagaaa catggttgct catcgtgatc 480
taaagccaga gaacctgtta cttgattcca aatacaatgt gaaacttgcc gactttgggt 540
taagtaatgt catgcatgat ggccattttc tgaagactag ctgcgggagt ccaaactatg 600
ctgcaccaga ggttatctca ggtaaattat acgctggacc tgaggttgat gtttggagct 660
gcggggtgat actttatgct cttctttgtg gcactcttcc atttgatgat gacaatattc 720
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<210> 20
<211> 244
<212> PRT
<213> Triticum aestivum

<400> 20

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Met Glu Gly Asn Thr Arg Gly Gly Gly His Ser Asp Ala Leu Lys Asn
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Tyr Asn Val Gly Arg Thr Leu Gly Ile Gly Thr Phe Gly Lys Val Arg
             20                  25                  30

Ile Ala Glu His Lys His Thr Gly His Lys Val Ala Ile Lys Ile Leu
         35                  40                  45

Asn Arg Arg Gln Met Arg Thr Met Glu Met Glu Glu Lys Ala Lys Arg
     50                  55                  60
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Glu Ile Lys Ile Leu Arg Leu Phe Ile His Pro His Ile Ile Arg Leu
 65                  70                  75                  80

Tyr Glu Val Ile Tyr Thr Pro Thr Asp Ile Phe Val Val Met Glu Tyr
                 85                  90                  95

Cys Lys Tyr Gly Glu Leu Phe Asp Cys Ile Val Glu Lys Gly Arg Leu
            100                 105                 110

Gln Glu Asp Glu Ala Arg Arg Ile Phe Gln Gln Ile Ile Ser Gly Val
        115                 120                 125

Glu Tyr Cys His Arg Asn Met Val Ala His Arg Asp Leu Lys Pro Glu
    130                 135                 140

Asn Leu Leu Leu Asp Ser Lys Tyr Asn Val Lys Leu Ala Asp Phe Gly
145                 150                 155                 160

Leu Ser Asn Val Met His Asp Gly His Phe Leu Lys Thr Ser Cys Gly
                165                 170                 175

Ser Pro Asn Tyr Ala Ala Pro Glu Val Ile Ser Gly Lys Leu Tyr Ala
            180                 185                 190

Gly Pro Glu Val Asp Val Trp Ser Cys Gly Val Ile Leu Tyr Ala Leu
        195                 200                 205

Leu Cys Gly Thr Leu Pro Phe Asp Asp Asp Asn Ile Pro Lys Leu Phe
    210                 215                 220

Lys Lys Ile Lys Gly Gly Ile Tyr Ile Leu Pro Ser His Leu Ser Ala
225                 230                 235                 240

Pro Ala Arg Asp
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<210> 21
<211> 2006
<212> DNA
<213> Triticum aestivum

<400> 21

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tggggattgg ttcgttcggg aaggtcaaga ttgccgagca tataaaaact ggtcacaagg  180
tggccgtcaa gatccttaac cgccggaaaa tcaaaaacat ggagatggaa gagaaagtga  240
aaagagagat caagatatta agattattca tgcacccaca tatcatccgc ctttatgaag  300
tgatagaggc accagctgat atttatgtgg ttatggagta tgttaagtct ggtgaattgt  360
ttgattacat tgttgagaaa ggtaggctac aggaggaaga ggcccgccgt ttctttcaac  420
agatcatatc tggtgttcaa tattgccaca ggaacatggt ggtgcaccgc gatctaaagc  480
cggagaacct tcttttggac aataattgtg atgttaagat tgcggatttt ggcttaagta  540
atgttatgcg tgacggccac tttcttaaga caagttgtgg tagcccaaat tatgcagctc  600
cggaggttat atctggaaaa ctgtacgctg ggcctgaagt tgatgtatgg agctgcggtg  660
ttattcttta tgctcttcta tgtggtactc ttccatttga tgatgagaac atacccaacc  720
tttttaagaa aataaagggt ggaatatata cccttccaag ccatttatca ggcccagcaa  780
gggatttgat tccaaggatg ctagttgttg atcctatgaa gaggataacc attcgtgaaa  840
tacgcgagca tccatggttt gaagctcaac tcccacgata tttagccgtg cctccaccag  900
atactgcaca acaagttaaa aagattgatg aagaatctct tgttaaagtt atcagtctgg  960
gatttgacaa aaacctgctg gttgaatcaa ttcataatag attgcaaaat gaggcaacag 1020
ttgcatatta tttgtttttg gataataaga gtcgcacaac aactggctat cttggagctg 1080
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ggtatcaaga agctatggaa tcgtctttct cacccattac tccaagtgaa acacaaagtc 1140
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tagaagtatt actgattaat cctatattgg ccccttggga catactccta ctctactgct 1860
gtttacttgc atgtaatttt tactgtctgg gtctccagac cagaccacgt acacgaataa 1920
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aaaaaaaaaa aaaaaaaaaa aaaaaa 2006

<210> 22
<211> 523
<212> PRT
<213> Triticum aestivum

<400> 22
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Ala Arg Trp Lys Met Glu Thr Gly Gly Lys Asp Gly Asn Pro Leu Lys
20 25 30

Asn Tyr Arg Ile Gly Lys Thr Leu Gly Ile Gly Ser Phe Gly Lys Val
35 40 45

Lys Ile Ala Glu His Ile Lys Thr Gly His Lys Val Ala Val Lys Ile
50 55 60

Leu Asn Arg Arg Lys Ile Lys Asn Met Glu Met Glu Glu Lys Val Lys
65 70 75 80

Arg Glu Ile Lys Ile Leu Arg Leu Phe Met His Pro His Ile Ile Arg
85 90 95

Leu Tyr Glu Val Ile Glu Ala Pro Ala Asp Ile Tyr Val Val Met Glu
100 105 110

Tyr Val Lys Ser Gly Glu Leu Phe Asp Tyr Ile Val Glu Lys Gly Arg
115 120 125

Leu Gln Glu Glu Glu Ala Arg Arg Phe Phe Gln Gln Ile Ile Ser Gly
130 135 140

Val Gln Tyr Cys His Arg Asn Met Val Val His Arg Asp Leu Lys Pro
145 150 155 160

Glu Asn Leu Leu Leu Asp Asn Asn Cys Asp Val Lys Ile Ala Asp Phe
165 170 175

Gly Leu Ser Asn Val Met Arg Asp Gly His Phe Leu Lys Thr Ser Cys
180 185 190

Gly Ser Pro Asn Tyr Ala Ala Pro Glu Val Ile Ser Gly Lys Leu Tyr

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        195                 200                 205

Ala Gly Pro Glu Val Asp Val Trp Ser Cys Gly Val Ile Leu Tyr Ala
    210                 215                 220

Leu Leu Cys Gly Thr Leu Pro Phe Asp Asp Glu Asn Ile Pro Asn Leu
225                 230                 235                 240

Phe Lys Lys Ile Lys Gly Gly Ile Tyr Thr Leu Pro Ser His Leu Ser
                245                 250                 255

Gly Pro Ala Arg Asp Leu Ile Pro Arg Met Leu Val Val Asp Pro Met
            260                 265                 270

Lys Arg Ile Thr Ile Arg Glu Ile Arg Glu His Pro Trp Phe Glu Ala
        275                 280                 285

Gln Leu Pro Arg Tyr Leu Ala Val Pro Pro Pro Asp Thr Ala Gln Gln
    290                 295                 300

Val Lys Lys Ile Asp Glu Glu Ser Leu Val Lys Val Ile Ser Leu Gly
305                 310                 315                 320

Phe Asp Lys Asn Leu Leu Val Glu Ser Ile His Asn Arg Leu Gln Asn
                325                 330                 335

Glu Ala Thr Val Ala Tyr Tyr Leu Phe Leu Asp Asn Lys Ser Arg Thr
            340                 345                 350

Thr Thr Gly Tyr Leu Gly Ala Gly Tyr Gln Glu Ala Met Glu Ser Ser
        355                 360                 365

Phe Ser Pro Ile Thr Pro Ser Glu Thr Gln Ser Pro Ala His Gly Asn
    370                 375                 380

Arg Gln Gln Pro Tyr Met Glu Ser Pro Val Gly Leu Arg Pro His Phe
385                 390                 395                 400

Pro Ala Asp Arg Lys Trp Ala Leu Gly Leu Gln Ser Arg Ala His Pro
                405                 410                 415

Arg Glu Val Met Thr Glu Val Leu Lys Ala Leu Gln Glu Leu Asn Val
            420                 425                 430

Tyr Trp Lys Lys Ile Gly His Tyr Asn Met Lys Cys Arg Trp Ser Pro
        435                 440                 445

Pro Gly Phe Pro Gly Gln Glu Asn Met Asn His Thr Asn Tyr Asn Phe
    450                 455                 460

Ser Ala Glu Pro Ile Glu Thr Asp Asp Leu Gly Asp Lys Leu Asn Leu
465                 470                 475                 480

Ile Lys Phe Glu Leu Gln Leu Tyr Lys Thr Arg Asp Glu Lys Tyr Leu
                485                 490                 495

Leu Asp Leu Gln Arg Ala Ser Gly Pro His Leu Leu Phe Leu Asp Leu
            500                 505                 510

Cys Ala Ala Phe Leu Ala Gln Leu Arg Val Phe
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515 520

<210> 23
<211> 512
<212> DNA
<213> Zea mays

<400> 23
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catagaggga ggaggcgcgg cggagatggt gggcggtggc ggcggcgggc cgctgcggcg 120
ggtgggcaag tacgaggtgg gacgcaccat cggggaaggc accttcgcca aggtcaagtt 180
cgcgcagaac accgagaccg gggagagcgt cgccatgaag gtgctcgacc gctcctccat 240
cctcaagaac aagatggccg aacagattaa gagagaaata tccataatga agcttgtcag 300
gcatcccaat gtcgttaggc tacacgaggt tttggcaagc cggaagaaga tatttataat 360
tctggagttc atcactggcg gcgagctatt cgataaaatt attcgtcatg ggagactcag 420
tgaagcagat gcccgcagat actttcagca gcttattgat ggtgttgatt tttgtcacaa 480
gaaaggagtc taccatcgag acttaaagcc tg 512

<210> 24
<211> 132
<212> PRT
<213> Zea mays

<400> 24
Arg Arg Val Gly Lys Tyr Glu Val Gly Arg Thr Ile Gly Glu Gly Thr
1 5 10 15

Phe Ala Lys Val Lys Phe Ala Gln Asn Thr Glu Thr Gly Glu Ser Val
20 25 30

Ala Met Lys Val Leu Asp Arg Ser Ser Ile Leu Lys Asn Lys Met Ala
35 40 45

Glu Gln Ile Lys Arg Glu Ile Ser Ile Met Lys Leu Val Arg His Pro
50 55 60

Asn Val Val Arg Leu His Glu Val Leu Ala Ser Arg Lys Lys Ile Phe
65 70 75 80

Ile Ile Leu Glu Phe Ile Thr Gly Gly Glu Leu Phe Asp Lys Ile Ile
85 90 95

Arg His Gly Arg Leu Ser Glu Ala Asp Ala Arg Arg Tyr Phe Gln Gln
100 105 110

Leu Ile Asp Gly Val Asp Phe Cys His Lys Lys Gly Val Tyr His Arg
115 120 125

Asp Leu Lys Pro
130

<210> 25
<211> 552
<212> DNA
<213> Glycine max

<220>
<221> unsure
<222> (385)
<223> n = A, C, G or T

<400> 25
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ttccactgca gaatttcagt ttattcttat ctagctcaat tctggttgtg ggtttatctc 180
ttactggaag acagactttg aggtagactc cttataagtg cgcagaagtt caagtgtaga 240
gaatgagtca gcctaagatt aaacgccgag ttggtaaata cgaggtgggg aggaccattg 300
gtgaaggtac atttgcaaag gtgaaatttg caaggaactc tgagacagga gagccgtggc 360
tcttaaaatt cttgacaagg agaangtgct aaagcacaag atggctgagc agatcaggag 420
agaagtagct acaatgaaac taatcaagca tccaaatgtt gttcgattgt atgaagtcat 480
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gtaaccatgg aa 552

<210> 26
<211> 77
<212> PRT
<213> Glycine max

<220>
<221> UNSURE
<222> (39)
<223> Xaa = ANY AMINO ACID

<400> 26
Val Gly Lys Tyr Glu Val Gly Arg Thr Ile Gly Glu Gly Thr Phe Ala
1 5 10 15

Lys Val Lys Phe Ala Arg Asn Ser Glu Thr Gly Glu Pro Trp Leu Leu
20 25 30

Lys Phe Leu Thr Arg Arg Xaa Val Leu Lys His Lys Met Ala Glu Gln
35 40 45

Ile Arg Arg Glu Val Ala Thr Met Lys Leu Ile Lys His Pro Asn Val
50 55 60

Val Arg Leu Tyr Glu Val Met Gly Ser Lys Thr Asn Ile
65 70 75

<210> 27
<211> 391
<212> DNA
<213> Triticum aestivum

<220>
<221> unsure
<222> (179)
<223> n = A, C, G or T

<220>
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<222> (236)
<223> n = A, C, G or T

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<222> (361)
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<222> (371)
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<220>
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<222> (381)
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<220>
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<222> (386)
<223> n = A, C, G or T

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tggggattgg ttcgttcggg aaggtcaaga ttgccgagca tataaaaact ggtcacaang 180
tggccgtcaa gatccttaac cgccggcaaa tcaaaaacat ggcgatggaa gagaangtgn 240

caagagagat caagatatta agattattca tgcacccaca tatcatccgc ctttatnaag 300
tgatagaggc accagntgat atttatgtgg ntatgnanta tgtnaaagtc cggtganttg 360
nttgattata ntgtttctaa ngtctntata t 391

<210> 28
<211> 85
<212> PRT
<213> Triticum aestivum

<220>
<221> UNSURE
<222> (29)
<223> Xaa = ANY AMINO ACID

<220>
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<223> Xaa = ANY AMINO ACID

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<223> Xaa = ANY AMINO ACID

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<220>
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<222> (80)
<223> Xaa = ANY AMINO ACID

<220>
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<222> (82)
<223> Xaa = ANY AMINO ACID

<400> 28

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Leu Lys Asn Tyr Arg Ile Gly Lys Thr Leu Gly Ile Gly Ser Phe Gly
  1               5                  10                  15

Lys Val Lys Ile Ala Glu His Ile Lys Thr Gly His Xaa Val Ala Val
            20                  25                  30

Lys Ile Leu Asn Arg Arg Gln Ile Lys Asn Met Ala Met Glu Glu Xaa
         35                  40                  45

Val Xaa Arg Glu Ile Lys Ile Leu Arg Leu Phe Met His Pro His Ile
     50                  55                  60

Ile Arg Leu Tyr Xaa Val Ile Glu Ala Pro Xaa Asp Ile Tyr Val Xaa
 65                  70                  75                  80
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Met Xaa Tyr Val Lys
85